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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,910	07/10/2003	Miki Yanagawa	108391-00034	9552

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EXAMINER

HO, HOAI V

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/615,910	YANAGAWA, MIKI	
	Examiner	Art Unit	
	Hoai V. Ho	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 5 is/are rejected.
- 7) ☐ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/10/03</u> | 6) <input type="checkbox"/> Other: _____ |

1. This office acknowledges receipt of the following items from the Applicant:

Information Disclosure Statement (IDS) was considered.
2. Claims 1-5 are presented for examination.

Specification

Title

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Wong et al. U. S. Patent No. 6243280.

Figures 3 and 4 of Wong are directed to an associative memory comprising: a plurality of match lines (ML_a and ML_b), from a first match line (ML_a) to an n-th match line, where n is an integer greater than 1, wherein a plurality of associative memory cells (CAM cells) being connected to each match line; a first match line pre-charge circuit (34a) that pre-charges the first match line; a first sense amplifier (36) that detects a potential of the first match line; an m-th match line pre-charge circuit (34b) that pre-charges an m-th match line (ML_b), where m is a number of integers from 2 to n; a control circuit (FIG. 8) for the m-th match line that operates the m-th match line pre-charge circuit, only when the potential of the (m-1)-th match line detected by the (m-1)-th sense amplifier is a potential when stored data in the associative memory cell connected to the (m-1)-th match line agrees with search data; and an m-th sense amplifier that detects a potential of the m-th match line (col. 4, lines 39-47 and col. 5, lines 1-38.

Claim Rejections - 35 USC §103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. U. S. Patent No. 6243280 in view of Fried et al. U. S. Patent No. 4862412.

Wong discloses all the subject matter claimed except for silence further comprising an m-th search bus driving circuit that supplies search data to associative memory cells connected to the m-th match line, after the m-th match line has been pre-charged.

However, this limitation was well known in the art at the time the invention was made. For example, Figures 1 and 3 of Fried disclose an m-th search bus driving circuit (21 that supplies search data to associative memory cells connected to the m-th match line, after the m-th match line has been pre-charged (col. 2, lines 16-19, lines 61-65, col. 3, lines 1-3 and col. 4, lines 6 and 7). It would have been obvious to a person of ordinary skill in the art at the time invention was made to recognize that Wong could have the m-th search bus driving circuit as taught by Fried in order to increase a capability of driving the search data to associative memory cells.

8. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Sywyk et al. (USP 6240000) and Almy (USP 4670858) disclose a content address memory.

Allowable Subject matter

9. Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

Claims 3 and 4 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure, taken individually or in combination, does not

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teach or suggest the claimed invention having a delay circuit that supplies a search bus control signal for activating the (m-1)-th search bus driving circuit to the (m-1)-th search bus driving circuit, with predetermined timing delayed in order to activate the m-th search bus driving circuit in claim 3; and further comprising: a first latch circuit that temporarily holds the potential of the (m-1)-th match line detected by the (m-1)-th sense amplifier, and supplies the potential to the m-th match line control circuit, synchronously to the next clock pulse; and a second latch circuit that temporarily holds a search bus control signal for activating the (m-1)-th search bus driving circuit, and supplies it to the m-th search bus driving circuit, synchronously to the next clock pulse in claim 4.

11. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

12. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (571) 272-1777. Other inquiries of this application should be called to (571) 272-1562 or the fax number (703) 872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



H. Ho
August 6, 2004



Hoai V. Ho
Primary Examiner
Art Unit 2818